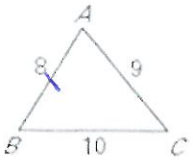
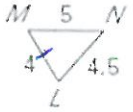
Homework 61-FORM A
Similar Triangles – SSS & SAS

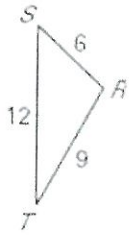
Name:_____
Period:____Date:_____

Failure to show all work and write in complete sentences will result in LaSalle.

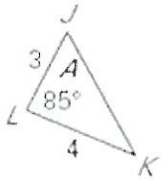
1) Is either ΔLMN or ΔRST similar to ΔABC?

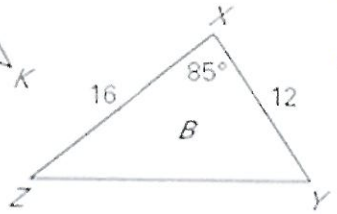






2) Determine whether the two triangles are similar. If they are similar, write a similarity statement and find the scale factor of ΔA to ΔB.

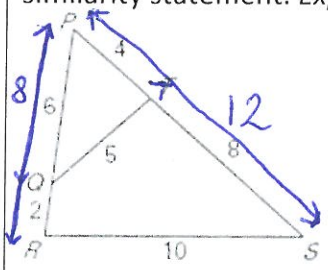




$\angle L \cong \angle X$

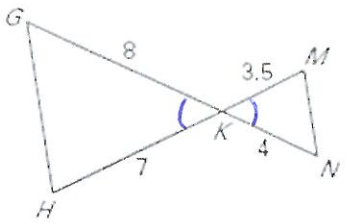
$\frac{3}{12} = \frac{4}{16}$

3) Show that the triangles are similar and write a similarity statement. *Explain* your reasoning.



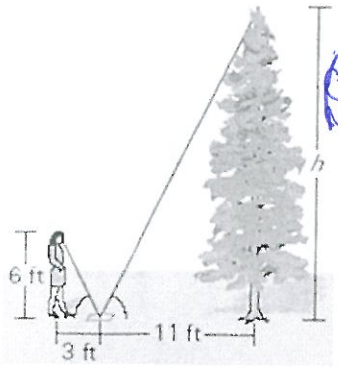
$\frac{4}{8} = \frac{5}{10} = \frac{6}{12}$

4) Show that the triangles are similar and write a similarity statement. *Explain* your reasoning.



$\frac{3.5}{7} = \frac{4}{8}$

5) In order to estimate the height *h* of a tall pine tree, a student places a mirror on the ground and stands where she can see the top of the tree, as shown. The student is 6 feet tall and stands 3 feet from the mirror which is 11 feet from the base of the tree.



a. What is the height *h* (in feet) of the pine tree?

(CROSS MULTIPLY) $\frac{3\text{ ft}}{11\text{ ft}} = \frac{6\text{ ft}}{X\text{ ft}}$

b. Another student also wants to see the top of the tree. The other student is 5.5 feet tall. If the mirror is to remain 3 feet from the student's feet, how far from the base of the tree should the mirror be placed?

$\frac{3\text{ ft}}{X\text{ ft}} = \frac{5.5\text{ ft}}{22\text{ ft}}$